“The Next Day, Everything Was Flat”

OEHS Professionals Confront Devastation in Haiti

BY ED RUTKOWSKI

Jennifer Hornsby-Myers, CIH, OHST
NIOSH

The magnitude 7.0 earthquake that struck Haiti on Jan. 12, 2010, was strong enough to cause heavy damage even to earthquake-resistant structures, according to the United States Geological Survey. In a country like Haiti, the poorest in the Western Hemisphere, the quake’s effects were catastrophic. It struck in the afternoon, when many Haitian children were in school. The epicenter was a mere 16 miles from Port-au-Prince, Haiti’s capital and largest city, where more than 700,000 people lived. According to the stories of survivors available from many online sources, the shaking lasted for nearly a full minute. Multistory buildings collapsed; whole neighborhoods were destroyed. The Haitian government put the death toll at 230,000, with another 300,000 injured and 1 million homeless.

The gravity of Haiti’s predicament elicited responses from dozens of governmental and non-governmental aid organizations across the world. Even an agency such as the Centers for Disease Control and Prevention (CDC), which operates primarily in the U.S., sent several personnel to Haiti to help with recovery efforts.

One of those personnel was Jennifer Hornsby-Myers, an industrial hygienist, AIHA® member, and Commander (CDR) in the U.S. Public Health Service. As regional operations director for the NIOSH Emergency Preparedness and Response Office in Morgantown, W.Va., Hornsby-Myers was deployed as a CDC liaison to the U.S. military’s Joint Task Force-Haiti, or JTF-H. Her job was to advise JTF-H on public health issues—malaria and other diseases, infections, post-operation treatment of amputees, mosquito control, the movement of survivors. “I was basically an interpreter or facilitator,” Hornsby-Myers explains. “CDC has many public health assets. The military really doesn’t—that’s not what they do for a living. So [my role] was to help both sides understand what the other brought to the table.”

Hornsby-Myers was familiar with the military from her first job as a civilian industrial hygiene technician at Ft. Detrick in Maryland. In one of her first tasks as a professional, she participated in a health study of soldiers who worked in tanks, loading long-range shells into the cannon breech. For many years the shells had been wrapped in lead foil, and soldiers who opened the breech after a round was fired would get a face full of lead dust. Research had shown that these soldiers exhibited all of the effects of high lead exposure, including a higher rate of birth defects among their children, so the Army switched to an organic tin foil. “We went back and did a study to make sure the organic tins weren’t a problem, and they weren’t,” Hornsby-Myers says. She credits the project for starting her on a lifelong career in industrial hygiene.

“I thought, You can actually make a workplace better for somebody, even if it’s an unconventional workplace. That’s what got me hooked.”

Fundamentals
Hornsby-Myers left the snow and cold of Morgantown on Feb. 11, arriving hours later in the rubble of Port-au-Prince. It was her first foreign deployment, and one of just a handful for NIOSH. In 2005 she had taken part in relief efforts following Hurricane Katrina; her job then was to coordinate NIOSH resources requested by the states. In Haiti, by contrast, the U.S. Agency for International Development (USAID) and the military were very much in charge.

Asked to compare the Gulf coast post-Katrina and Haiti post-earthquake, Hornsby-Myers pauses; it’s clear there is no comparison.

“The similarities are, they’re both tragedies,” Hornsby-Myers says. “The differences are huge. First of all, you’ve got over 230,000 people dead in Haiti. Occupational safety and health and basic human needs—I don’t know how to say this—you could address them with Katrina. You had resources. In Haiti, those resources were slim to none.
"It was a very intense, very physically challenging environment, and there were urgent health and safety issues there that were difficult to deal with, but we did the best we could."

To the degree that anyone could focus on occupational health and safety in those conditions, Hornsby-Myers concentrated on basic physical hazards like heat stress and fatigue. People working in field hospitals and temporary morgues were wearing Tyvek suits in temperatures that exceeded 90 degrees. "They were dropping for obvious reasons," Hornsby-Myers says. "First of all, it's incredibly stressful, emotionally and physically. But that whole heat stress—it's like we forgot ourselves and what we know because we were so quick to rush in and do what we do."

Asbestos concerns came up now and then, but with no way to test for anything, she advised military personnel to simply stay away. "I made a call on one place—I said, 'Look, it's got 9x9 tiles and it's cracked. I don't think anybody needs to go into it.' You have to adjust your criteria for how you make a decision in a place like Haiti. But that doesn't mean you can't use sound IH principles. There are certain things that you can see, and as a seasoned veteran of IH, you can say, 'You know what, we don't need to sample, we just need to not be here.'"

The necessity of narrowing her professional scope to the most basic fundamentals led Hornsby-Myers to consider what the industrial hygiene profession could accomplish in poor nations, where survival trumps worker safety. She tells of Haitians being paid to sort through rubble for valuables. One day she saw three teenagers hanging on the sides of a partially collapsed building. "There was a sheet of concrete that the roof had folded in half, basically. One half was up, and the other half was hanging by three pieces of rebar. This piece of concrete was probably about two feet thick, probably 20 by 40 yards in size, and three Haitian teenagers were at the top, and each one of them had a hack saw going into those pieces of rebar.

"The whole time I was there, I kept thinking, How do we affect a country like Haiti? How do we make it a better place for them to work, especially in an environment where people would literally risk their lives for $5 a day? "Part of me thinks you could make a whole lot of progress in a place like Haiti with a little bit of money. But you've got this whole issue of culture. Could you really make a difference? There were people crawling through houses looking for valuables, and they were willing to do that for $5 a day, and a lot of them got crushed doing it. But there was someone else standing right there ready to go do it. What is the responsibility for AIHA or an IH community to effect change there?"

**Preparation**

Hornsby-Myers' deployment lasted three and a half weeks. It was far from the kind of project she thought she'd be involved in when she began her IH career as a technician at Ft. Detrick. "Some people say, 'I used to do that again in a heartbeat.' Well, I would do it again, but I would hesitate," she says. "Having a fuller understanding of what it means to go at a particular stage in a disaster of that nature, I would do it, and I would be better prepared. You learn from those kinds of things. But I would definitely do it again.

"And I do think that we can make a difference. We just have to figure out how."

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Jeff Lewis
Fairfax County (Va.) Fire and Rescue

On Jan. 13, the day after the earthquake, two planes carrying Virginia Task Force 1—Fairfax County's elite urban search and rescue team—landed in Port-au-Prince. The 72 personnel included physicians, paramedics, and structural engineers; most, like Jeff Lewis, the team's medical coordinator, were professionals, although a few volunteers made the trip, too.

In 22 years as an emergency responder, Lewis had been all over the world. With Virginia Task Force 1 he was sent to Iran following the December 2003 earthquake that struck the city of Bam and killed nearly half its residents. He was twice deployed to Turkey following earthquakes. But he had never seen misery on the scale that afflicted Haiti.

"I've been to disaster-impacted areas before, so my frame of reference was fairly good for being able to deal with it personally," Lewis says. "But still, when you put boots on the ground and you're confronted with the phenomenal level of devastation that everyone is exposed to, it is very humbling."

Lewis compares the work of sifting through rubble to "a very complicated and dangerous game of Pick-up Stix, where you need to figure out exactly which piece of the game you're going to remove and then put something else in its place to hold the rest of the stuff up to make sure the whole pile doesn't come down on you."

Search and rescue teams provide as much medical care as they can to survivors before handing them off to other responders. Providing temporary shelters, tending to refugees, and other necessary functions in the aftermath of natural disasters are beyond the team's scope.

"It was obviously a life-changing event for everyone involved," Lewis says of his Haitian deployment. "The level of human trauma, the level of infrastructure damage—it was complete. It was a country that was functioning to the best of its ability one day, then the next day, everything was flat."

Listen to Jeff Lewis' interview with Safe & Sound, AIHA's internet radio show, at www.aiha.org/podcasts/safe/Episod_21Fairfax.mp3.
Stefan Wawzyeniecki, one of 12 volunteers from the Norwich, Conn.-based Haitian Health Foundation (HHF), flew into Port-au-Prince the last week of April. From the air he could see the tent cities that had sprung up around the Port-au-Prince airport, a sea of blue tarps. This was his fourth trip to Haiti; on his previous trips he had noted small signs of progress—some roadway improvements, fewer armed guards at the airport, better access to running water. Now, witnessing the devastation firsthand, he knew all that progress had been wiped out.

“Haiti was already so many years backward from the rest of the world,” Wawzyeniecki says, “and I’ve heard some public health officials say that it’s going to take them as much as 12 years to get to the point where they were before the earthquake.”

At the HHF mission in Jérémie, a city of 50,000 on the mountainous western end of the island of Hispaniola, Wawzyeniecki and the other volunteers—including his daughter, Rachel, and Dr. Jeremiah Lowney, the founder and executive director of HHF—helped tend to the Haitians’ basic needs. Jérémie was spared the worst of the earthquake’s effects, but well over one hundred thousand refugees had settled there, and the overcrowding had taken a toll on the city’s already limited resources. The people’s desperation was palpable. One day, someone stole a wad of bills from Lowney.

“This was my fourth trip, and I left Haiti sadder than any of the previous trips,” Wawzyeniecki says. “A lot of that had to do with the human element part of it. When I say human element, I mean, it’s human-nature-to-survive-type stuff.”

Wawzyeniecki’s career and his volunteering are both something of a family affair. He met his wife, Patti, an AIHA® member, at the University of Massachusetts-Amherst, where he worked in a school laboratory and Patti was taking graduate courses in environmental health and industrial hygiene. They currently work at the University of Connecticut, where Stefan is the manager of chemical health and safety and Patti is an industrial hygienist at the university health center. They began volunteering for HHF in 2003 and went to Haiti together as part of an HHF mission in 2006.

HHF volunteers who travel to Jérémie are used to doing whatever they’re asked to do. On previous trips, the Wawzyenieckis had weighed babies, operated a chainsaw, assisted a dentist, and installed kitchen cabinets at the clinic. This time, for the most part, Stefan was distributing food and supplies, both in Jérémie and in the surrounding villages. Meanwhile, Rachel, who had recently graduated with a master’s degree in social work and had asked to go to Haiti as a graduation present, spent the bulk of her time at the Center for Hope, a clinic for women in the final trimester of pregnancy.

One day, Rachel rode to the clinic with a boy of 19 or 20 who had been trapped in his home in Port-au-Prince at the time of the earthquake. The boy’s parents had died, and his brother had freed him from the rubble by removing part of his leg with a hammer, pummeling the bone until it broke off. Stefan Wawzyeniecki says that Dr. Lowney, who learned of the boy’s predicament on a Monday, made some phone calls and arranged an appointment at a clinic; by Thursday, the boy had a prosthetic leg.

“That’s the kind of story that you walk away from saying, ‘Okay, at least you could help one person,’” Wawzyeniecki says. “That’s the kind of thing where you look at the human spirit and say, ‘It can survive.’”

More information about HHF is available at www.haitianhealthfoundation.org.

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